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the position that the axioms are synthetic propositions, *a priori*; but even if this position be dropped, the space representation might still be the necessary *a priori* form in which every coextended manifold is perceived. This [*i. e.*, dropping the axioms] is not surrendering any essential feature of the Kantian position."

I make bold to differ from this. The mere innateness of the spatial form of sensibility is surely not the essence of the Kantian position. Every sensationalist empiricist must admit a wealth of native forms of sensibility. The important question is: Do they, or do they not, yield us *a priori propositions*, synthetic judgments? If our "sensation" space does this, we are still Kantians in a deeper sense by far than if we merely call the spatial *quale* a form of *Anschauung*, rather than an *Empfindung*. But if the new geometry of Helmholtz and others has upset the necessity of our axioms (and this appears to be the case; see, especially, the article just quoted), then the Kantian doctrine seems literally left without a leg to stand upon.

THE PHILOSOPHY OF THOMAS AQUINAS.

(A LETTER ADDRESSED TO THOMAS DAVIDSON, AND TRANSLATED BY HIM FOR THIS JOURNAL FROM THE ITALIAN.

[The author of the following letter, which I believe I am at liberty to print, I do not know. Last spring, when I was looking over, in Rome, the mediæval commentaries on Aristotle, and trying to discover their value for a true interpretation of his text, it was suggested to me that I should do well to consult some of the more famous Catholic doctors who made a special study of Thomas Aquinas and his commentaries on Aristotle. An opportunity having presented itself to me to do this, I seized it eagerly, and soon became satisfied that the much-maligned scholastics had understood Aristotle at least as well as any one who came after them, and, as a consequence, had a philosophy which, for thoroughness and profundity, left most succeeding systems far behind it. I became especially interested in the doctrines of the greatest of mediæval thinkers, Thomas Aquinas, and most gladly accepted the offer of Father Domenico Marinangeli, of the cathedral at Aquila, in the Abruzzi, to obtain for me a summary of that philosophy from a friend of his who knew it thoroughly, and who was at work on an exposition of it, hereafter to be given to the public. The following is this summary, which I have translated from the Italian, in the hope that it may help to interest Americans in the works of the great Catholic thinker. Our Protestant prejudices, caused by the abuses of

Catholicism, have perhaps long enough blinded us to the great truths that lie embedded in the doctrines of that system, and, with the aid of a shallow Baconianism, cut us off from the historical development of thought in the world. When our thinking returns to the basis of Aristotle, as it inevitably must do, we shall have much to learn from the schoolmen.

The italics in the letter are the author's; the Greek quotations have been added by me. — T. D.]

DEAR SIR :

§ 1. Before presenting you with an epitome of the Thomistic philosophy, allow me to recall to your attention a few truths professed by all.

1. That the human mind *adds nothing* to, and *takes nothing away* from, the nature of things when it unites with and cognizes them.

2. That our mind, in the *act* of cognition, sets out from the *real, concrete essence* (οὐσία), and not from the abstract or possible (τὸ ἐξ ἀφαιρέσεως ἢ τὸ δυνάμει).

3. That the proper object of philosophy is the supreme reasons of things (αἱ πρῶται αἰτίαι or τὰ ἐξ ἀρχῆς αἵτια).

4. That Catholic Ontologism consists in asserting and maintaining the supremacy of God in rational science.

5. That this supremacy consists in the placing of God as the highest principle of philosophy and the *objective law* of our *speculative judgments*, in such a manner that, even according to the schools of the adversaries of Ontologism, His ineffable and divine will is the supreme law and norm of our moral actions.

Now, I say : 1. That according to Saint Thomas, the powers of the mind are in part *active* and in part *passive*, and that in the *process* of cognition the latter precede the former (1 Sum., q. 77, art. 3).

2. That Being stands to the *passive powers*, ut principium et causa movens ; to the *active*, ut terminus et finis (ib. id., art. 4). The object of this article is to show that the powers of the mind are *ordered*.

3. That Being, *principium et causa movens* (ὅθεν ἡ ἀρχὴ τῆς κινήσεως) *est ens actu*, or *real*, according to the Thomistic axiom : *Nilhil reducitur de potentia in actum nisi per aliquod ens actu*. (Ἀεὶ γὰρ ἐκ τοῦ δυνάμει ὄντος γίγνεται τὸ ἐνεργείᾳ ὄν ὑπὸ ἐνεργείᾳ ὄντος.

Aristotle, *Metaph.* IX, 8.) I cite no passage, because Saint Thomas repeats this everywhere.

4. That the intellect ($\nu\omega\delta\varsigma$) is the primal power of the mind, and the *first of the passive powers* (1 S., q. 82, art. 3); and the will, the first of the active powers, being the moving cause of all the forces of the mind. Hence this power is able to make the intellect pass from the *condition of potentiality* to the second acts, but cannot make anything pass to the *first act*, which *act* is caused directly and immediately by God in our intellect. (1. S., q. 82, art. 4, ad 3). This article, *Utrum voluntas moveat intellectum?*—translated by the famous Cardinal de Vio into this other, *Utrum voluntas deducat intellectum de potentia in actum*—replies to the question in the negative as regards the *first act* ($\pi\rho\acute{\omega}\tau\eta \epsilon\nu\tau\epsilon\lambda\acute{\epsilon}\chi\epsilon\iota\alpha$), and then proceeds to solve the following problem: *Num primus motus intellectus reducatur in Deum et quomodo?* If you should see fit to read the profound demonstration of Cardinal de Vio, who, in his commentary on Saint Thomas, certainly was not prejudiced by party spirit in favor of this or of that other system, there being no such controversy in his day, you will see most plainly that God is the efficient cause of our *first intelligence*, or *first act*, as the Thomistic phrase is.

These theories bring him to the question, Does the human mind always think or not? ($\delta\tau\epsilon \mu\acute{\epsilon}\nu \nu\omega\epsilon\acute{\iota} \delta\tau\epsilon \delta' \omega\delta \nu\omega\epsilon\acute{\iota}$. *De An.* III. 5. 2.) Let the following proposition serve as a reply to the question: *Utrum potentiæ rationales sint semper in actu respectu objectorum in quibus attenditur imago.* (Lib. 1, sent. dist. 3, q. 4, art. 3.)

In this thesis Saint Thomas distinguishes, with regard to our intellect, the simple *intelligere* ($\nu\omega\epsilon\acute{\iota}\nu$) from *discernere* ($\alpha\iota\sigma\theta\acute{\alpha}\nu\epsilon\sigma\theta\alpha\iota$) and *cogitare* ($\delta\iota\alpha\nu\omega\epsilon\acute{\iota}\sigma\theta\alpha\iota$). Now, simple *intelligere*, “*nihil aliud dicit quam simplicem intuitum intellectus in id quod sibi est praesens intelligibile.*” And *intuition*, “*nihil aliud est quam praesentia intelligibilis ad intellectum quocumque modo;*” that is, as he explains, not implying any *intentio cognoscentis*, Being presenting itself not as *objectum cognitum*, clearly and distinctly, but as simple *principium cognitionis et objectum agens ad potentiam*, and therefore known confusedly.

In this sense the mind *semper intelligit*—what? *Se et Deum*—itself and God. This *confused intelligence* is *initial* and *imperfect*, as Saint Thomas himself admits in reply to the second difficulty. His words are: *Ad secundum ergo dicendum, quod philosophus loquitur de intelligere, secundum quod est operatio intellectus completa distinguentis vel cogitantis et non secundum quod HIC SUMITUR INTELLIGERE.* (Ib. id. ad 2.) Now, why has it not *consciousness, i. e., cognition*, clear, distinct, perfect, complete?

Consciousness is reflected cognition; therefore, it cannot take place where there is not first cognition. But in the *first act* there is no cognition. Inasmuch as in it there is only the simple intuition (*per simplicem intuitum*), and since that is merely the presence of the intelligible to the intellect (*presentia intelligibilis ad intellectum*), and not a determinate, but an indeterminate, presence (*quocumque modo et indeterminate*), the intuition results in the simple intelligence which the mind has permanently of itself and God (*intelligit semper se et Deum*), and not in cognition, inasmuch as that belongs not to simple *intelligence*, but to *discernere* and *cogitare*. Hence it is in vain that we strive to become conscious of the first act in which God is present to the mind, *non tanquam objectum cognitum sed tanquam principium cognitionis*. Just so we do not feel that we perceive the light, which is not a distinct object presenting itself to our eyes, but is the objective principle of vision which informs our eyes, makes them act, and enables them to see. And here it is necessary to observe that man, being of a nature composed of spirit and body, and nature being the *principium operationis*, the action of man, even in regard to spiritual objects, can never be entirely spiritual; but every operation of the intellect is accompanied by the operation of the body in the brain, and hence it is that every idea is accompanied by an image, every intellectual concept by a concept of the imagination. For this reason the consciousness, which is the cognition by the mind of its *own* acts, cannot take place with regard to that act which is entirely spiritual, not caused by the human compound, but entirely divorced from connection with the body, as is the first act of the intel-

lect — that primordial act by which the intellect is formed or stamped with the divine light, which is the Word-Cause-Reason of things, animated or invested with the power to reflect the action of that word in things — enabled to act. These facts enable us to understand that the expression “first act” has not the same meaning that any act of a man has with reference to the other acts that follow it. The first act, if it is first in regard to time, is still more so in regard to order. Out of it spring the second acts, which *begin* and *end*, i. e., *pass*, while it presents, with respect to the second acts, neither beginning nor end, but precedes them all, and includes them all; in short, does not pass, but endures. Now, there is no consciousness of that which neither begins nor ends — of that which is forever uniform and permanent. So we do not *feel* the act by which the soul informs the body and makes it live, although the psychologists admit and insist upon that act. Our great Rosmini admitted a *fundamental feeling* as the substratum of all sensations. The psychologists have bitterly combated the doctrine, of that philosopher, and so they pretend to have a consciousness of the first act whereby the Word-Cause-Reason of things originally informs the spirit.

Consciousness is reflected cognition, which has for its *term* that which was the *efficient principle* in direct cognition. (1 S., q. 85, art. 2.) In consciousness we do not perceive again the object already perceived in direct cognition, but we perceive ourselves, our own act, our own direct cognition; hence, *immediately* we perceive the knowing *subject*, and *mediately* in the subject, already united by direct cognition to the *object*, we again perceive the *object* itself. When, however, we perceive it the second time, we perceive it just as we have already perceived it in direct cognition. Now, how can any one of us assume to have a consciousness of our *first act*, if it is not our act, or an act having its origin in us, although produced by God in us, while we remain passive. We are not the efficient principle of the first act, but God; the formation of our intellect is the term of that act. Adversaries might reply that we have consciousness not only of our *act*, but also of our passive *state*, even when it is not we who act, but an-

other that acts on us, and we do nothing more than *receive* his action. This is most true, but with one condition, viz. : that we *react* upon that which acts upon us, and receive its action in this way. Without such reaction on our part, we receive nothing ; he who receives, acts in receiving ; he acts against another act — that is, reacts. How many objects in the course of a walk impress themselves upon our senses, without our having any recollection of them ? And we have no recollection of them because we have had no consciousness of them, and we have had no consciousness of them because we did not react when they impressed themselves, in order to receive and feel them. Now, there can be no reaction to receive the first operation of our intellect, because there can be no reaction by the intellect which is not formed, but is being formed in that act.

The truth is, the passivity of the first act is the creation of activity ; the intellect is formed and set in action — put to its first act — which is causal of all other acts. And such a first act of the intellect is that intuition of which Saint Thomas speaks, and that *intelligere* pure and simple, which is not yet *discernere* or *cogitare*. For this reason, if the intellect is essentially self-compenetrative and endowed with consciousness, even its first *intelligere* must be accompanied with its proper consciousness. Nevertheless, consciousness of the first *intelligere* must, in every respect, correspond to that act, and hence must be (1) inborn in the intellect, and not produced by the intellect after the manner of its other conscious acts ; (2) not distinct, or gathered up and laid aside in the memory, like all the other acts of consciousness, but diffused without beginning and without end, equally and permanently underlying as a principle, and dominating as a criterion all the other acts of the intellect ; (3) confused and vague in itself, as well as in respect to the object apprehended (intuited, *angeschaut*) in the first act, according to the theory above expressed ; (4) consciousness, not of any apprehension of an object, but of derivation from the formal object of our spiritual faculties and of distinction in it. Now, that there is such a consciousness in man is proved by his original and fundamental feeling of

the true, the good, and the beautiful. This feeling is called *common sense* in respect to the true, *moral sense* with respect to the good, simply and absolutely, and *æsthetic sense* with respect to the beautiful. What, after all, is this feeling but the consciousness of that first act, whereby we are stamped by God with His word and image and drawn to Him?

Yes, drawn to Him; and the accomplishment of this drawing is all our destiny. This is the final reply; this is the highest outcome of the system. Do you strive after a consciousness of intuition? Well, the whole development, the whole round of second acts is simply the consciousness of intuition. The feeling of the true, the good, and the beautiful is the first moment in this consciousness. The celebrated Gioberti, prince of modern Italian philosophers, in explaining his ontologism, his distinguished two states of the intellect, that of intuition' and that of reflection, which is simply the consciousness of intuition. Reflection reconstructs what is given in intuition, and reconstructs it *distinct*, making use of created terms, and so *appropriates* it, and finally apprehends as the term of its own cognition (the objectum cognitum of Saint Thomas) what in intuition was merely its *principle et causa movens*. If consciousness is the reflex act which repeats in inverse order all the process of the direct act, which sets out from God, it must retrace the whole line which separates the intellect from God, and retrace it in the same manner in which the intellect has descended from Him. But what is this mode save that in which the ray sets out and proceeds from the sun — in other words, the mode of the emanation of light? Now, the spiritual light is the reason. Hence the true and perfect consciousness of intuition is attained only by *reasoning*. Reason is the word of God, is the divine form (ad imaginem et similitudinem nostram), stamped with which the intellect becomes, subsists, and acts a true ray of God upon the universe. Yes, the reasoning which deals with the existence and attributes of God is the consciousness of intuition; and, indeed, without this basis and the lever of intuition, how could the finite intellect rise to the infinite — to God? There is a *quid divinum* (θεῖον τι) in the intellect which draws it upward, lifts it to the

metaphysical order, to the transcendental order of causes and principles, and gives a *real value* to its speculations. The intellect must, through reflection, reascend the whole line by which it has descended in intuition. It must do this setting out from the opposite extremity — that is, from the creature — and this is the proof of God for the creature, according to the teaching of the Book of Wisdom, of Saint Paul, of Saint Thomas, and of all the doctors of the Church. The path from the creature to God, by which consciousness must reascend, is the *metaphysical* order of causes and principles by which it rises from the *physical* order of created things to the *absolute* order of the *First Cause* and the *Final Reason*, which is God.

§ 2. The existence of this first, continuous, and perpetual intelligence with which our minds are furnished from the first moment of their creation is always presupposed by the Angelic Doctor in the development of the active powers, quæ e converso se habent — that is, which ascend from the created to the creator — whereas the passive powers descend from the creator to the created, and are the *guides* of the *former*. In fact, I open the first *Summa* and read: “Utrum Deum esse sit demonstrabile?” In this article he establishes the following proposition: “Deum esse, quamvis non a priori, a posteriori tamen demonstrari potest, ex aliquo ejus notiori nobis effectu.” Having accomplished this demonstration, he concludes: “Unde Deum esse, secundum quod non est *per se notum quoad nos*, demonstrabile est per effectus nobis notos” (1 S., q. 2, art. 2). What, then, is the nature of that knowledge of God whereby He is known to us in Himself, and which is not derivable from created things? To me, it is the simple intelligere per simplicem *Intuitum quocumque modo* et indeterminate vel sub quadam confusione, as he teaches elsewhere. This is the *real presence* of God which the mind always enjoys in respect to Him, who is principium et causa movens, and who can be such only in His essence (*sussistenza*), and not in his *image* or *similitude* or *reflection* (vestigio), as the psychological school holds. Hence it is clear that when Saint Thomas teaches that God is not the *first object* known quoad nos (τὸ πρῶτον ἡμῖν), he speaks with reference to *cogitare* and *discernere*, and not of intel-

ligere — that is, with reference to the *active powers*, to which belongs *determinate* and *distinct* cognition, and not to the *passive powers*, which have only initial and indeterminate cognition. Here there is no middle alternative. Either the knowledge of God per simplicem Intuitum precedes the *determinate* and *distinct* knowledge which belongs to *cogitare* and *discernere*, and which is derivable from created things, and then *causa dicta est*, or it does not; and then there is no meaning (1) in the words *secundum quod non est per se notum quoad nos*; (2) in the words *notiori nobis effectui*, and hence in the whole thesis of the Angelic Doctor, written in comparative language, which, according even to the grammarians, supposes and absolutely implies the positive. But there is more than this. Since Saint Thomas teaches that this intelligere *per simplicem intuitum* is attended with a certain indeterminate love toward God, * * * consequitur quidam amor indeterminatus (Loc. cit. lib. Sent.); this love ought, according to the Thomistic exposition of the psychological school, to relate itself, not to God, but to that which is in some manner the *image*, the *similitude*, or the reflection of Him, which appears in His works. According to such an hypothesis, who does not see that the primacy of divine love would be canceled from the human heart and mind. Hence it is clearly manifest that the school which excludes the efficacy of the supreme cause in respect to the first act of our intelligence is the very source of *modern incredulity*. In fact, if we assume that God is not the objective and ontological law of our intellect, it is impossible to demonstrate without self-contradiction that He is the immediate, immutable, and invariable rule of our wills.

The same perpetual intelligence is presupposed by the Angelic Doctor in his *Summa contra Gentiles*, cpp. 12, 13, and 14, in which he demonstrates that God “non est maxime intelligibilis quoad nos.” Now, who does not know that between the superlative and nothing there is a middle way? This is the confused and indistinct cognition in relation to which our mind “*quodammodo est in actu, et quodammodo in potentia*”

(1 S., q. 83, art. 3). He arrives at the same truth in the proposition demonstrating that the soul is a substance subsisting *per se*. His words are: “Anima humana, cum sit omnium corporum cognoscitiva, est incorporea et subsistens.” He proves this thesis by two different arguments, the former of which he derives from the nature of the bodily organ, which, being determined *ad unum*, cannot know more than one thing in the manner in which our mind knows. The latter, derived from the nature of the action of the mind itself, he expresses thus: “Ipsum igitur intellectuale principium, quod dicitur mens, vel intellectus, *habet operationem per se cui non communicat corpus.*” What, then, is the intellective operation which the mind possesses independently of the body? I find nothing but intelligere, having no sensible sign representing it in the knowable. But what is the object peculiar to this intellectual faculty which transcends the sensible? The Angelic Doctor answers even this question in the third article of the same question; for brevity’s sake I transcribe merely the proposition: Cum de ratione animæ prout in communi consideratur, sit esse formam corporis prout vero in speciali, in quantum scilicet est intellectiva, *esse cognoscitivam formarum absolutarum sive universalium*: dici debet animam non esse compositam ex materia et forma (1 S., q. 75, art. 5). So the mind can act by itself, without the concurrence of the body.

Again I open Saint Thomas, and find the following thesis: “Cum principium intellectivum sit quo *primo* intelligit homo, sive vocetur intellectus sive anima intellectiva, necesse est ipsum uniri corpori humano ut formam” (1 S., q. 76, art. 1). Let any one who has eyes read the demonstration of this article, and then tell me whether our soul can *cognize nothing* in its *present* state without that body to which, according to Saint Thomas, the soul gives life. “Manifestum est autem quod *primum quo corpus vivit est anima*, * * * similiter principium quo primo intelligimus.” He teaches and maintains the same truth when he denominates our mind *higher reason*, because through itself it intendit “*æternis conspiciendis aut*

consulendis ; conspiciendis quidem secundum quod ea in se ipsis speculatur, consulendis vero, secundum quod ex iis accepit regulas agendorum ” (1 S., q. 79, art. 9).

In short, the object of the higher reason is the supreme reasons of things ; the object of the lower reason, the things themselves. The former are absolute and universal, the latter contingent and particular. Now, which of the two reasons ought to be the *guide* of the other—the higher of the lower, or *vice versa*? Let Saint Thomas decide : “ Ad primum dicendum quod ratio inferior dicitur a superiori deduci, vel ab ea regulari, in quantum *principia* quibus utitur *inferior ratio* deducuntur et diriguntur a principiis superioris rationis ” (Id. id. id., ad. 1). Who does not see that, according to the psychological theory, the principles of the lower reason, which has for its exclusive object the contingent, ought to direct and guide the principles of the higher reason, whose proper object is the eternal reasons of things, considered as efficient causes of the things themselves? But, according to Saint Thomas, how are *such forms* in themselves? To the angel of the schools they are :

1. *Absolute* and *universal*, according to the proposition above alluded to.

2. *Immutable* and always *identical*, *semper unum*, with themselves, in spite of the plurality of the *cognizing* intellects. He says : “ Ad quartum dicendum quod, sive intellectus sit *unus* sive plures, id quod intelligitur est *unum*. Id enim quod intelligitur non est in intellectu secundum *se* sed secundum *suam similitudinem* ; lapis enim non est in anima sed species lapidis, (ὡς γὰρ ὁ λίθος ἐν τῇ ψυχῇ ἀλλὰ τὸ εἶδος. *De An.* III., 8, 2) et tamen lapis est id quod intelligitur non autem species lapidis, nisi per reflexionem intellectus supra se ipsum, alio quin scientiæ non essent de rebus sed de speciebus intelligibilibus ” (1 S., q. 76, art. 2, ad 4).

3. *Objective*, whether because they can *speculari in seipsis* by the human mind as *higher reason*, or because they are in God, as first cause. Let us hear what he says of him : “ Ad primum ergo dicendum quod species intelligibiles quas PARTICIPAT noster intellectus reducuntur, sicut in *primam causam*, in

aliquod principium per suam essentiam intelligibile, scilicet in DEUM. Sed ab illo principio procedunt mediantibus formis rerum sensibilibus et materialibus a quibus scientiam colligimus, ut Dionysius dicit.” Cap. 7, De divin. nom. lect. 2. (1 S., q. 84, art. 4, ad. 1). And here I must inform you that this testimony is the *essence* of *Catholic Ontologism*, inasmuch as alone it contains and expresses the integral elements of science, such as God and the world, creator and creature. And what else is the formula, “Being creates the existent,” but the literal translation of this text? And yet, who would believe it? The opponents of our doctrine use this thesis as their chief weapon in their attacks upon Ontologism! They shout to the four winds of heaven: “Read the reply to the third difficulty; open your eyes once and forever to the truth; learn the true Thomistic system contained in it.” This reply reads: “Quod intellectus noster possibilis reducitur de potentia in actum per aliquod ens actu, id est per *intellectum agentem*, qui est virtus quædam animæ nostræ, ut dictum est (q. 79, art. 3); non autem per intellectum separatum sicut per causam *propriam proximam*, sed forte sicut per causam remotam (ib. id., ad 3). It is plain, they conclude, that the cause of the *first act* of our intellect is that *virtue* of our soul called by Saint Thomas the active intellect (νοῦς ποιητικός), and that the separate (χωριστός), active intellect enters in, perhaps, *ut causa remota*, but never *ut proxima*, as the Ontologists aver.

I reply that this observation is meaningless, because it is made by our opponents to apply to the order of *passive powers*, whereas in this thesis Saint Thomas speaks *EXCLUSIVELY* of the *active powers*, whose proper object is the contingent. He speaks in the sense of the first reply, in which he had said: “Sed ab illo principio procedunt mediantibus formis rerum sensibilibus et materialibus a quibus scientiam colligimus.” Hence, I say that if the *active, separate, i. e., ontological* intellect, which, as we shall see, is God, were the *proximate* and *proper* cause of the secondary acts of our possible intellect, and not the active *human* intellect, man would no longer be an *active* and *free* being, but a *reed* shaken by every wind in the hands of God — a horrible doctrine, which Saint Thomas

avoids by saying that the active, *separate* intellect aids the mind in its reflective period as a *causa remota*. This doctrine will be made clearer in what follows.

4. *Evident* in themselves, and therefore *principium cognitionis*. Saint Thomas says: "In rationibus æternis anima non cognoscit omnia objective in præsentī statu, sed causaliter (1 S., q. 84, art. 5). This proposition is the basis, the foundation, the pivot of all the Thomistic philosophy. This consists of two parts. In the first, he overthrows the doctrine of Plato, and shows the absolute impotence of the human mind to acquire a knowledge of things *directly* and *intuitively* in their eternal reasons *alone*. In the second, he shows that the eternal reasons, considered as *efficient causes* of the things themselves, are the first and highest principle of Christian philosophy. Have the goodness to read the demonstration, and you will be convinced of the correctness of my exposition. In fact one needs but to cite the foundation of the thesis to be entirely convinced of it. This foundation is the following passage from Saint Augustine: "Si ambo videmus verum esse quod dicis et ambo videmus verum esse quod dico; ubi quæso id videmus? Nec ego utique in te, nec tu in me, sed ambo in ipsa quæ supra mentes nostras est, incommutabili veritate." "Veritas autem incommutabilis," notes the Angelic Doctor, "in æternis rebus continetur. Ergo anima intellectiva *omnia vera* cognoscit in rationibus æternis." Now, who would say that the immutable truth which identifies the different thoughts of two men is the *active* intellect, "qui est aliquid animæ nostræ," as the defenders of psychologism add? Who does not see that it is in opposition to the basis of this system, viz.: "invisibilia Dei per ea quæ facta sunt conspiciuntur," that Saint Thomas establishes the above proposition? Who does not see that the above proposition is true only of the PRESENT LIFE, as is stated in the words "in *præsentī statu*," and not of the *future life*, as is continually asserted and vociferated by the *Civiltà Cattolica* and its satellites, who say that the vision of the eternal reasons of things is shared only by the *blessed*, and by *pure* and *holy souls*, according to the conclusion, and is not the universal ontological light of the human race!

That, in the view of Saint Thomas, God the creator is the *rational element* in science, its immutable principles, the supreme harmony of human thought, and the ontological light of the human mind, is further manifest from the following proposition: “Species intelligibilis se habet ad intellectum ut id quo intelligit intellectus: non autem ut id quod intelligitur, nisi secundario; res enim cujus species intelligibilis est similitudo est id quod primo intelligitur” (1 S., q. 85, art. 2).

From this proposition it is clear that our minds require a similitude (*εἶδος*) distinct from the intellect and from the thing known, in order to cognize anything!

But you will say, If the said intelligible species is not id quod intelligitur, but merely id quo intelligitur, how is it that the mind does not warn us of this in the first act of cognition? And what? Must things be admitted which the spirit does not know? I reply, with the Doctor Saint, and say that, although to the direct and confused cognition, called by ontologists cognition of the intuitive order, nothing else is given us but the object, nevertheless, in the reflective cognition, the *idea*, or similitude, *id quo intelligitur*, is given *secundario*. Indeed, the *real* and *concrete* thing is always that which the mind perceives and receives in preference, *primo*. Here are his words: “Intellectus supra seipsum reflectitur, secundum eandem reflexionem intelligit et suum intelligere et speciem qua intelligit. Et sic species intellectiva SECUNDARIO est id quod intelligitur; sed id quod intelligitur PRIMO est RES cujus species intelligibilis est similitudo” (1 S., q. 83, art. 2). This doctrine is elsewhere established by the Doctor Saint (*De An.*, Bk. III, § 8). The above truth is still further confirmed by this other proposition: “Magis universalia et communia sunt priora in nostra *intellectuali* et *sensitiva cognitione*.” Now, I ask what are the universals, but the eternal, reasons which, according to Saint Thomas, must inform our *intellectual* and *sensitive* cognition? In this same thesis is included a golden doctrine, which explains in a marvelous way the nature of the PASSIVE and ACTIVE powers. It says: “Secundo oportet considerare quod intellectus noster de potentia in actum procedit. Omne autem quod procedit de potentia in actum,

prius pervenit at *actum incompletum qui est medius inter potentium et actum*, quam ad actum perfectum. Actus autem *perfectus* ad quem pervenit intellectus est scientia completa, per quam *distincte et determinate res cognoscuntur*, ACTUS autem incompletus est scientia incompleta, per quam sciuntur res *indistincte sub quadam confusione*. Quod enim sic cognoscitur, secundum QUID *cognoscitur in actu* et QUODAM MODO in POTENTIA ; unde Philosophus dicit quod, *sunt primo nobis manifesta et certa confusa magis, posterius autem cognoscimus distinguendo principia et elementa*” (ἐστὶ δ' ἡμῖν πρῶτον διὰ καὶ σαφὲς τὰ συγχυμένα μᾶλλον ὁσπερὺν δ' ἐκ τούτων γινέται γνῶρισμα τὰ στοιχεῖα καὶ αἱ ἀρχαὶ διακρίσσι τὰ ἅτα). Phys. I, 1. Cf. *De An.* II, 2, 1. (1 S., q. 85, art. 3.)

This, then, is the manner in which Saint Thomas in several places explains, *ex professo*, the nature of the *intelligible species*, *similitudes*, *absolute forms*, and *eternal reasons* of things which constitute the *rational, constant, and immutable* element in science — the element which is *semper unum et secundum omne tempus*. Now, can such forms be called *abstract, subjective*, and *logical*, as Saint Thomas calls the cognitions of sensible things? Are they *identical, i. e., unum et idem*, with those *universal, immaterial, and necessary* cognitions of which he speaks in the following proposition: “Anima per intellectum cognoscit corpora, *immateriali, universali, et necessaria* cognitione? (1 S., q. 84, art. 1.) I answer, No. In fact, the first are *absolute, universal, immaterial, objective*, and *evident per se*; the second, on the contrary, are *abstract, subjective*, and *logical, i. e.*, existing solely in the cognitive mind. As such, they cannot be called *semper unum*, since they vary according to the plurality and different capacities of the cognizing intellects; or *objective*, since they cannot be contemplated (*speculari, θεωρεῖσθαι*) in *se ipsis*, like the first; or *self-evident*, since man, according to Saint Thomas, cannot understand, or cognize, or know **THESE SECOND**, nisi convertendo se ad phantasmata. Id *ibid.* (δι' ὃ οὐδέποτε νοεῖ ἄνευ φαντασμάτων ἡ ψυχὴ. Aristotle, *De An.* III, 7, 3.) But you will say, Why did not Saint Thomas distinguish these two sorts of forms? I reply that he did distinguish them, in the passage where he speaks, *ex*

professo, of the latter, viz., in prop. 84, art. 1. In that article, in fact, to those who, with Saint Augustine, object, *quod corpora intellectu intelligi non possunt; nec aliquid corporum nisi sensibus videri potest*," he replies: "*Ad primum ergo dicendum, quod verbum Augustini est intelligendum quantum ad ea quæ intellectus cognoscit (the abstract, universal cognitions of which he had spoken), cognoscit enim corpora intellegendo, sed non per corpora neque per similitudines materiales et corporeas, sed per species immateriales et intelligibiles, quæ per suam essentiam in anima esse possunt.*" Evidently the Sainted Doctor here distinguishes the intelligible species, *quibus intellectus cognoscit*, from the *subjective* and *abstract* species, i. e., the *universal cognitions*, * * * *quæ cognoscit*. In fact, if the *universal, necessary*, and *subjective* cognitions (subjective, because existing only in the human intellect) were identical with the objective *intelligible* species, *quibus intellectus cognoscit*, the reply of Saint Thomas would be meaningless, inasmuch as it would concede to the adversary that, in truth, *corpora intellectu comprehendere non possunt*. Hence the universal, abstract, and necessary cognitions of which Saint Thomas speaks in question 84, article 1, could never be *such* unless they were recognized as *faithful copies* of the eternal species (forms) and reasons of things, *quibus intellectus cognoscit*. To Saint Thomas, therefore, these *absolute, universal forms, similitudes, intelligible species, eternal reasons*, and *efficient causes of things* are the only fount of the eternal and necessary element in science, and, as such, are objective and exist outside of the human spirit. This theory is rendered evident by this other proposition of Saint Thomas, viz.: "*Quod intellectus divinus est mensura rerum; intellectus humanus est quodammodo mensuratus a rebus (q. 1, de veritat., art. 2).*"

Now I ask, by what things is the human intellect measured? Is it by the materiality of things? No, because the less is not the measure of the greater. Who does not know that the human intellect is the noblest and greatest essence of created things—that it is their lord and master? It cannot, therefore, be measured by them. Shall it be meas-

ured by the *universal, necessary, abstract, and logical* species, which are the cognitions derived by the mind from sensible things (according to Saint Thomas)? This, likewise, is impossible; for these stand related to the intellect as the *contained to that which contains*, as the *effect* to the *cause*, as the *measured to that which measures*, and hence it cannot be comprehended by them. What then are the things which measure it? They are none other than the supreme reasons, considered as efficient causes, which, according to the opposite school, are found in things *obscure and involved*, and which must be *made clear and unfolded* by being placed in full light by ontological reflection. Hence it is clear that our intellect in some *sense* and in a certain *respect* is measured by things, *quodammodo*, but not *totally*. But wherein consists this particular *sense* and *respect* in which our intellect is measured? Let us listen to the Angelic Doctor himself: “Ad primum ergo dicendum, quod anima non secundum quamcunque veritatem judicat de rebus omnibus, sed secundum veritatem primam, in quantum resultat in ea, sicut in speculo, secundum prima *intelligibilia*. Unde sequitur quod veritas prima sit major *animá*; et tamen etiam *verilas* creata, quæ est in intellectu nostro, *est major anima*, non *simpliciter* sed *secundum quid*, in quantum (this is the particular respect) est *perfectio* EJUS sicut etiam scientia posset dici major anima. SED VERUM EST quod nihil SUBSISTENS est majus mente rationali nisi Deus” (1 S., q. 16, art. 6, ad 1). God, then, is the Being greater than the human mind, and He alone is the measure of it, and of whatever truth exists in it. “Cum ergo Deus sit primus intellectus et primum intelligibile, oportet quod veritas intellectus cujuslibet ejus veritate mensuretur (*Contra Gentes*, Lib. I, cp. 62). This doctrine is opposed by its adversaries with a distinction, not derived from Saint Thomas, but from their own brains. They say that the knowledge of things may be *absolute* or *relative*, and that the latter requires the absolute idea in order to be apprehended, whereas the other, since it may exist very well by itself, does not.

I reply: True cognition of a thing is that which perfectly

expresses its *nature*, *i. e.*, without *adding anything* to it or *taking anything away* from it. Now, which of the two kinds of cognition is *conformable* to the nature of created things — the relative or the absolute? Surely that which expresses, and is conformable to, the nature of created and contingent things. But relative cognition is the only one that is conformable to created and relative things, and hence this is the only scientific cognition of them. For this reason the pretended absolute cognition of them is not scientific, and cannot be invoked as such by the opposite school in defense of their interpretation of Thomism. Indeed, how can there be any absolute knowledge of the relative? The *relative* is only the *relative*, the finite the finite, etc., etc. Hence, from created things there can be derived no absolute knowledge; for, since cognition must be an effect of the truth, and truth an effect of being, as Saint Thomas teaches, “*Sic ergo entitas rei precedit rationem veritatis; sed cognitio est quidam veritatis effectus*” (*De Veritat.*, q. 1, art. 1), if an *absolute* cognition could be derived from relative things, there would be an effect greater than its cause. But that is self-contradictory; hence, also, it is self-contradictory to say that *relative* things can give *absolute cognition*. Therefore, the above distinction made by the psychological school in regard to created things is either altogether meaningless or expresses an absurdity. And so, I beg that school not to confound the *power* which we have of considering *abstractly* any property of a thing already known (*i. e.*, by abstracting or prescind-ing from all the other properties) with the *scientific* cognition of the thing itself, which can never be *true*, *certain*, and *universal* until it is completely equal to the thing itself. Indeed, it is true, as Saint Thomas says, that our minds can examine, abstractly, the color of an apple, without thinking of the apple in which it inheres; but just as, according to the axiom, there is no accident without substance, ontological existence of the color is impossible without the apple, so, likewise, it is impossible to acquire the *perfect knowledge* of it without its reality, or without the *common* idea of *being*, as Saint Thomas expresses himself. This doctrine, therefore, proves that, just as the existence of things created is

impossible without the creator, so it is impossible to know them as *absolute* or independent of Him. In proof of which I say that the knowledge of the *thinking subject*, of *liberty*, of *immortality*, called by the said school absolute knowledge, is not so, but merely relative, inasmuch as it includes the idea of cause. Indeed, the thinking subject is a potentiality which must pass into act, either *first* or *second*; but nihil reducitur de potentia in actum nisi per aliquod ens actu, according to Saint Thomas; hence the thinking subject, considered in itself, as it occurs in children, or in *potentiality*, necessarily includes the idea of cause. This *necessary relation* appears more manifestly whenever the thinking subject is confronted with the object thought. In truth, the human intellect, according to Saint Thomas, is *passive* and *receptive* in the act of cognition, and Being acts upon it (1 S., q. 79, art. 2).

Now, are not the efficacy and action of Being in relation to our intellect an effect? And is not Being, which produces this action, a cause? And is not immortality known in an act of intelligence? If so, does this school believe that the creature ceases to be a second cause, and that it no longer receives the influence of the first cause? Or does it believe that the latter will not be *causa et motor universalis* even in the other life? And are not reward and punishment an effect with reference to the soul? And is not God, the rewarder of the good and the punisher of the wicked, a cause? Hence the knowledge of the *thinking subject*, of freedom, and of immortality, however regarded, whether in itself or in relation to the temporal or eternal object, includes the idea of cause and hence is relative, not absolute, as is given out by the disciples of the psychological school, with an air of contempt and haughty triumph. From the above considerations it is clear that the Angel of the Schools established the following proposition: “*Intellectiva cognitio fit a sensibili non sicut a perfecta et totali causa, sed potius sicut a materia causæ*” (1 S., q. 84, art. 6).

If, in the view of Saint Thomas, the sensible is not the *perfect* and *total* cause of science, it is evident that the other portion must come from the above treated *eternal reasons*, or

else from our own *intellectual power* itself, called by Saint Thomas the *active intellect*. But the active intellect, “non se habet ut objectum agens ad potentiam,” *i. e.*, to the possible intellect (1 S., q. 79, art. 4, ad. 3); hence the active human intellect cannot be the complementary *efficient cause* of science. In order to be so, it would have to possess *in itself* the reasons of things; but these, as Saint Thomas teaches, it does not possess. “Ad nonum dicendum quod intellectus agens non sufficit per se ad reducendum intellectum possibilem perfecte in actum, CUM NON SINT IN EO DETERMINATÆ NOTIONES OMNIUM RERUM, UT DICTUM EST. Et ideo requiritur ad ultimam perfectionem intellectus *possibilis* quod uniatur *aliqua* illi *agenti* in quo sunt rationes omnium rerum, scilicet Deo” (1 S., q. *de anima*, art. 3, ad 9); hence the active intellect, “qui est aliquid animæ nostræ,” cannot furnish that part of science which does not come from sensible things. But, if this is the case, why has Saint Thomas not left us a formal proof of the fact that it was to the eternal reasons that he attributed the *perfect*, *complete*, and *scientific* knowledge of everything? I reply that Saint Thomas has given us a most luminous proof of what the scientific knowledge of this same mind of ours is. He says: “Sed verum est quod iudicium et efficacia hujus cognitionis, per quam *naturam animæ* cognoscimus competit nobis secundum *derivationem luminis intellectus nostri a veritate divina* in qua rationes omnium rerum continentur, sicut supra dictum est (quæst. 84, art. 5). Unde Augustinus dicit (*De Veritat.* in g. cp. 6, paulo ab init.): ‘*Intuemur inviolabilem veritatem, ex qua perfecte quantum possumus definimus, non qualis sit uniuscujusque hominis mens, sed qualis esse sempiternis rationibus debeat.*’ Est autem differentia inter has duas cognitiones. Nam ad primam cognitionem de mente habendam sufficit ipsa *mentis præsentia*, quæ est principium actus ex quo mens percipit seipsum; et ideo dicitur se cognoscere per *suam præsentiam*. Sed ad secundam cognitionem de mente habendam non *sufficit* ejus *præsentia*, sed requiritur *diligens et subtilis inquisitio*” (1 S., q. 77, art. 1).

From this authority it is as clear as the sun that the Angelic

Doctor derives the scientific knowledge of the human soul — *i. e., in universali* — from the eternal reasons, as the efficient causes of things, as he had taught in quæst. 84, art. 3.

I offer you this brief *resumé* of the Thomistic philosophy, in the hope that it may serve you as a guide in the study of Saint Thomas.

ALGORITHMIC DIVISION IN LOGIC.

BY GEORGE BRUCE HALSTED.

From its very start, logic has been suffering from the mistaken idea that it was actually an account of all the fundamental principles of legitimate inference, of all valid use of the reasoning faculty.

From the shackles of this self-imposed, but never fulfilled requirement it has not yet quite freed itself, and the confusing effects are visible alike in Ueberweg and Jevons. But once recognized that logic is not a branch of psychology, is conversant with classes of *things*, and that point is passed where it could be believed that mathematics was only a developed branch of ordinary logic, or supposed that the more powerful mathematics was trying to show that logic was only a branch of algebra.

In actual reasoning, the mind, far from being confined to the scholastic logic, jumps, climbs, and runs along in accordance with all sorts of principles, various, though valid.

These results, however, may be stated in terms of ordinary logic — that is, in terms of genus and species — of the relations of classes; and from the generality, simplicity, and certainty of this formal logic, it is, even from the new point of view, as worthy as it was ever thought to be of all study; more especially since those who, recognizing the fundamental character of other relations beside that of the simple copula, have worked on the “Logic of Relatives,” have not been able as yet, in spite of the fine contributions made by De Morgan, to bring any cosmos out of that chaos.